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MEMORANDUM FOR: Director of Computer Services, DDDAT

Sudject

Project Chive

REFERENCE: You. Final Report of Project CHIVE Final Report of Phase II (System Design)

I have followed with interest and reviewed with satisfaction the progress made toward the attainment of the goals of Project CHIVE, as most recently evidenced by the completion of the Phose II Report. CHIVE has, I believe, produced an information system design the general framework of which offers excellent prospects for success.

- I have approved all specific recommendations on pages 37-38 of Volume II (repeated on pages 2-3 of your memorandum), except for certain recervations on design concepts and implementation (Recommendation a) briefly outlined in the Attachment (dated 9 September 1965), and except Recommendation f.
- I cannot approve Recommendation I, inasmuch as it is inconsistent with our repeatedly stated policy that equipment in a system of the scale of CHIVE sust be considered an integral part of the system and be under the control of those responsible for the system's operation. In other words, the "load in OCS" is not, in my opinion, an appropriate basis for review of the hardware support issue at a later date, any more than is the prospective CHIVE load an appropriate basis for OCS justification for its future computer requirements. Our own experience and that of others fully supports the monagement concept of the task oriented and task managed computer installation.

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- 4. As you know, we plan to test as many of the CHIVE concepts as possible in a live environment, such testing to be conducted in case of the China branch in parallel with existing OCE activities, until we are satisfied that the system can go on its own.
- 5. Considering our obligations to our consumers, such an approach is wholly consistent with your own wish to see "a spirited evolution" and a project "directed vigorously into an operational posture." Indeed to make this possible, I have authorized and directed D/OCR to divert resources from on-going operations to CHIVE irrespective of DCI's action on my request for manpower and funds for Phase III.
- 6. My staff and I have been gratified by the dedicated and professional effort devoted to CHIVE by you and your staff. The continued fine cooperation between CCS and CCR cannot but yield success.

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RAY S. CLINE Deputy Director for Intelligence

Attachment: Comment Concerning Recommendation 1

(4n of D/OCS Memo) of the CHIVE

Phase II Report

cc: Executive Director-Comptroller

PARKE

O/DDI: :n1:14 September 1965

Distribution:

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20 July 1965

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MEMORANDUM	FOR:	Denuty	Danas		Intelligence
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THROUGH

DD/I CHIVE Officer

SUBJECT

: Project CHIVE, Phase II Report

1. Forwarded herewith is the final report of Phase II (System Design) of Project CHIVE. This report, I believe, represents a major milestone in the Agency's efforts to improve its operations in intelligence information processing. Project CHIVE is the first total system design approach to the central reference processing of that which this Agency and others collect or receive. The report meets our information processing problems head-on and recommends an imaginative, but realistic, plan for the development of a strong central

- 2. The basic characteristics of the proposed system
 - Integration of most of the elements of the Office of Central Reference under a radically different management umbrella. A geographic orientation is recommended as the first-level organizational cut.
 - Exploitation of all available source material within each geographic element using common indexing and vocabulary standards.
 - The use of the computer to search, manipulate, maintain, and print files. The emphasis here is on relegating to the machine the things it does best and on providing a sound base from which more sophisticated support
- 3. From the user point of view the above characteristics should provide a striking set of advantages:
 - He would see the OCR complex as a more homogeneous system than at present. He would need to contact only a few his problem.

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- He would be able to get an integrated response, assured that all available sources have been tapped and their relationships have been exploited.
- He should see a gradual increase in responsiveness, both with the respect to time and the value of the information provided to him.
- He should be able to interact with the system operators in a meaningful way so that the more critical sources are given the attention he desires.
- Eventually we would hope that the central system would lighten the individual analyst's burden in file housekeeping.

The Project Team has recommended that the design concepts developed in Phase II be implemented in an initial system—concentrating on Communist China—which would encompass most of the sources, files, procedures, and capabilities which would ultimately be applied on a world—wide basis. This would require the establishment of an identifiable unit in OCR to process Communist China material, the development of computer programs to accommodate the needs of this unit, and the establishment of management procedures in OCR to evaluate increments.

- 4. In summary, the report recommends that:
- a. The DD/I concur in the basic design and implementation plan as outlined in the Phase II report and approve proceeding into Phase III.
- b. OCR establish an initial CHIVE component to test design and implementation concepts.
- c. The initial component be operated in a simulated "live" environment in order to provide a demonstration of system feasibility and capabilities.
- d. The EDP programs required to support the initial CHIVE component and integrate its functions with extant OCR man/machine systems be prepared and coordinated with initial component implementation.

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- e. OCS integrate CHIVE requirements for the first two years of Phases III and IV into its overall plans for equipment and software acquisition and scheduling.
- f. The CHIVE machine processing load in OCS be reviewed after these two years to determine the needs and ultimate course to follow in the hardware/ software elements of the system.
- g. The central reference complex prepare for the introduction of the developing CHIVE system through reorganization of functions and selective centralization of files.
- h. OCR study the results of the document delivery analysis and obtain a document image system which will meet CHIVE objectives.
- i. OCR also consider application of EDP techniques, on a special project basis, to current functions which interact with the initial CHIVE component.
- j. The DD/I and DD/S&T allocate manpower and funds required to perform the tasks required under items a-i above.
- 5. The report is long and is not easy to read, but the complexity of the problem makes this inevitable. The material is organized into seven volumes. The first four-dealing with a description of the proposed system, management data, an implementation plan, and an interpretation of system requirements-are relatively short and summary in nature. Scanning the first few sections of each of these should give a good perspective of the project status. In particular, your attention is directed to Volume II-the Management Summary. Here the ultimate goals and benefits are discussed along with problems, potential risks, alternative paths to follow, and the ultimate impact which the system could have.
- 6. It should be emphasized that all the elements of the proposed system are not tied together as neatly as one might hope; several design and implementation problems exist. The most important of these are: security in an all-source system, the co-location and/or conversion of large extant OCR files of continuing interest, integration of these files and the people to process them, and an acceptable plan for phasing in the new organizational concepts which are recommended.

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- 7. Through the end of Phase II most of the project responsibility has been vested in the Development Division of OCS where the conceptualizing has been brought into focus and the design work was carried out. As the project moves toward implementation, however, major responsibility must be assumed by OCR where innumerable details can be best worked out. OCS will continue to play a significant role in the computer elements of the system and should continue to provide the long-range technical perspective.
- 8. You will note that the imaginative design and bold ideas in the report are contradicted to some extent by a hesitancy to move forthrightly into implementation. This is reflected in the recommendations and in the Phase III goal—a system ready for testing. The evolutionary approach which is recommended is wise, but it should be a spirited evolution, continually injected with fresh ideas and tangible encourage—ment from management. I would strongly recommend that the project be directed vigorously into an operational posture. I believe the problem is serious enough and that the task team is sufficiently competent to warrant a major implementation thrust, accepting the risks and mistakes which will be

Assistant Director Computer Services 25X1A

cc: DD/S&T

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CENTRAL INTELLIGENCE AGENCY

Office of central reference

9 September 1965

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MEMORANDUM FOR: Deputy Director for Intelligence

SUBJECT:

Project CHIVE Phase II Report

REFERENCE:

Transmittal Memorandum from the Director, Office of Computer Services dated 20 July 1965

GENERAL

1. OCR subscribes fully to the main thrust of the CHIVE Phase II Report and takes relatively limited exception, as detailed below, to some of the specific recommendations summarized in the referenced memorandum of the Director, Computer Services. The objectives and advantages of computer support to information processing have not materialized over night, rather they constitute a growing focus of the judgments of the Agency's information managers and users derived from seventeen years of intensive experience with the daily information needs of the intelligence community. The design effort within CHIVE represents much hard work by dedicated and competent people seeking to translate these broad objectives into an effective, practical system. We would emphasize, however, that CHIVE has been and continues to be faced with the challenging task of evolving new skills through the

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interaction of OCR staff, with its in-house knowledge of current and past information handling practice, and the OCS staff, with its experience in systems design and the operation of computers. In this general setting we believe that the CHIVE team has produced an information system design, the general framework of which offers excellent prospects for success.

- 2. Considerable momentum has been generated and, anticipating favorable DDI response, we have already combined under OCR management the CHIVE Task Force (CTT), consisting of the OCS/Development Division (on detail); the OCR Systems Analysis Staff; the embryonic CHIVE China branch; the machine-assisted translation project ALP; and a cadre to provide continuity in various procedural, file-building, selection, indexing and other tasks as we evolve from the initial China branch to other geographic areas. Many of these tasks are already under way, since they represent areas of development in ADP planning which we would explore regardless of the specific design proposal. As you know, we have estimated the additional OCR manpower requirement at 54 slots and are taking these from current OCR operating components while requesting an increased T/O for FY 1967. With OCS committed to provide 21 slots, the CHIVE Task Force for Phase III will constitute a 75 man staff effort.
- 3. Various alternative methods of proceeding are outlined in Volume II (pp 27-32) and are not repeated here; these were considered and rejected in favor of going ahead, in general, along the lines recommended in the report. Even so, a number of untested ideas and complex problems remain,

some of which are noted in the Attachment. Our major problem in attempting to implement the design as presented is people, i.e., their number; their proper allocation; their qualifications and capability to perform many new and exacting duties; and the constraints that their number or capacities may impose on the design goals themselves.

4. Earlier achievement of an operational capability, as requested by implication in meetings with the Executive Director-Comptroller, will be accomplished in three ways: a) by earlier implementation of the new document delivery (microstorage) system and its immediate application to all receipts, not just those on Communist China; b) by development within a few months of a computer-backed KWIC (keyword in context) index to Chicom document receipts, particularly for current awareness control; and c) by utilization of the cadro mentioned above to develop the tools for expanding more easily to other geographic areas.

SPECIFIC

5. We concur with all of the specific recommendations on pages 37-38 of Volume II (repeated on pages 2-3 of the referenced memorandum) except for certain reservations on design concepts and implementation (Recommendation a) which are briefly stated in the attachment, and on the management control of the computer element (Recommendation 1). The latter states

"That the CHIVE machine processing load in OCS be reviewed after these two years to determine the best ultimate course to follow in the management of the computer element of the system." The "load in OCS" is not the basis for review of the hardware support issue. It is a matter of record, both in the CHIVE and ADP Committee contexts, that the DDI wishes to have its own computer-support capability; we believe that this is a logical upgrading of the tools used in our existing OCR/ADP (punchcard) center, and that management control of these tools is essential for accomplishment of our mission. There is further, we believe, a growing and even dominant trend in other government and private sector applications of ADP systems towards the task oriented and task managed computer installation.

6. We plan to test as many of the concepts as possible in a live environment in Phase III and we also plan to conduct such testing and initial operation of the China branch in parallel with existing OCR line activities until we are satisfied that the system can go on its own. Finally, it seems appropriate to reemphasize the fact that CHIVE is being manned by OCR from its existing resources, hence some curtailment of OCR services is being imposed during the 18-month implementation and testing period.

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RECOMMENDATION

- 7. That, in responding to the Director/Office of Computer Services, you:
 - a. Approve Recommendation (a) noting the qualifications reflected in our attachment:
 - b. Approve Recommendations (b) (e) and (g) (i);
 - c. Note Recommendation (f) but state that it is DDI policy to procure its own equipment.

Director of Central Reference

Attachment a/s

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Concur:

DDI CHIVE Project Officer

Concur

Assistant Deputy Director for Intelligence

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Approved:

Deputy Director for Intelligence

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Attachment

9 September 1965

Comment Concerning Recommendation 1 (4a. of D/OCS Memo) of the CHIVE Phase II Report

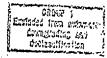
General

The recommendation is: "That the DD/I concur in the basic design and implementation plan as outlined in the Phase II report and approve proceeding into Phase III. As noted in the body of the memorandum to which this is an attachment, OCR concurs, in general. We anticipate rapid progress in the areas where the existing OCR documentation system is particularly experienced and effective; these include document control and current awareness indexing, named object indexing, and physical storage and retrieval of documents. On the other hand, we are seeking to provide, under a general philosophy of parallel operations, ample opportunity for test and evolution of the CHIVE approach to concept indexing, modified user roles in information storage and retrieval, and management of the central reference function. OCR capabilities in the three principal information management fields of a) open literature exploitation, b) intelligence documentation, and c) specialized information services, e.g., biographic, graphic, installations, are already highly developed. All are embraced in the CHIVE concept. We approach the CHIVE program and objectives with confidence and great interest but, also, with particular concern for the appreciation and utilization of the strongths of our existing systems.

I. Design Concepts

a. Geographic Organization

Such seems intuitively desirable and the arguments which led to the recommendation are persuasive; it will not obviate multiple-handling of documents but its probable advantages direct our acceptance of it for initial implementation testing in Phase III. Considerable attention must be directed to the problem of handling documents concerning two or more areas, also to the impact on our information (as distinct from document) services by absorption of the present functional divisions. The proposed topic organization (economic, political, S&T and military) at the second



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level is logical for some areas of the world but not necessarily for all.

b. Production of Finished Biographic Intelligence

The CHIVE proposal for complete assimilation of biographic processing and service, including finished intelligence production, will be given a fair test but our doubts about complete assimilation without degrading biographic services should be noted. The principal ingredient in our present service is quality, acquired through concentration on biographics as a profession in itself. It seems more likely that the preservation of a separate biographic function at the lowest feasible unit within a CHIVE geographic organization will occur - and even this passes management/coordination problems in producing a report concerning people from several countries. But, the CHIVE approach will be tried with the goal being improved support to the biographic services performed.

c. Personnel Position Requirements and Responsibilities

We agree with a division of labor between the information analyst and the content indexer, but have reservations about the split being as complete as proposed, with a pool of content indexers. We are most skeptical of the proposal that high school graduates can do the content indexing but we will test the idea with selected high quality graduates and not reject it out of hand.

d. Named Object Indexing

We subscribe to the logic of concentrating on named object indexing but past experience and forecasting indicate the need for continued attention to subject control without degradation. Realistically, subject indexing is less challenging, and it is harder to held college graduates in such an activity. It may make much sense to develop a technical school in indexing to train high school graduates who would be challenged by such work. Aspects of the indexing scheme itself, particularly the complexities of linkage and phrase-building need more work in Phase III.

e. Single Point Service

The concept is good; we have steadily moved toward it over the years, but there never will be just one point - nor is there evidence that such, in

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its literal sense, is desired by the customer. The design itself does not provide it, but it does reduce the number of points to be visited, and will tend, through the geographic organization, to more closely approximate single point service since the majority of requestors come to us at any one time with a particular area interest. Again, problems of coordination will result from multi-national interests.

f. System File Building

The files proposed would definitely enhance our present support capability. Manpower requirements, input selection criteria, indexing time requirements, query language complexity and security considerations are major subjects for detailed study during Phase III.

g. All-Source Integrated Input/Output

All-source service is a must for those cleared, as is collateral-only service for those not fully cleared (particularly in DDP and in other agencies for whom we provide services of common concern). Integrated all-source service is a highly desirable goal for which we will aim; it is here, particularly with respect to file building, output from the system and customer access, that security poses questions which require much additional investigation. The CHIVE design tends in its Special Center (DDI) support emphasis to exclude the not-fully-cleared. This cannot be. It is probable that a new security policy toward computer processing of information for retrieval will have to be developed for integrated information files to obviate the need for separate security classification indexing for each item, attribute, linkage, phrase and record compiled from multi-source documents. Otherwise manpower and computer storage space problems of staggering proportions would result.

h. Centralized Document File

Physical co-location of all document files is a desirable objective and will be undertaken. This, too, will pose some problems of access by non-fully cleared customers but these can be resolved. Depending in part on the distance of the file from intelligence analysts, decentralized document files with high activity rates (e.g., selected dossiers, target

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installation folders) may, and probably will, have to be maintained. Data on the rates of use of individual files of these types will be gathered, as will information on the feasibility of on-demand re-constitution of such files from the document storage system, with and without remote console links. The CHIVE proposal is for an off-line, non-automated document storage system; we agree and have obtained same. Future systems, fully automated and representing the next level or two beyond Walnut, are in the advanced design stage and will be considered for our use when available - perhaps about 1969-70.

i. Inclusion of Maps and Ground Photography

We agree that map and graphic indexes should be included within CHIVE. We propose to go one step further and consider inclusion of the whole ground photography function now in Graphics Register within the CHIVE system.

j. Other Problems

Volume II notes other unresolved problem areas requiring resolution during Phase III. Without attempting to elaborate, they include 1) feasibility of conversion of OCR's existing and very large punchcard files; 2) utilization under CHIVE of present day OCR files that are not in machine language; 3) purging or data retirement; 4) emergency backup files.

II. Implementation

- a. We are in basic agreement with the Phase III implementation schedule, but note that it must be flexible and that man, in the man-machine system, must not become locked in and made to accommodate to the machine because of machine constraints, programming expenditures, and the like. Maintenance of the schedule is dependent upon such factors as 1) programming and procurement of EDP equipment; 2) staffing of the CHIVE Task Force; 3) major design changes resulting from indexing experience, testing biographic integration, the KWIC indexing operation and others.
- b. We recognize the need to press forward as rapidly as possible and intend to do so, but we repeat that this field of computer involvement

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within a very large all-subject all-area reference environment is in its infancy. We have in-house talent with experience unmatched elsewhere. Patience and understanding and attendance to the purpose of our existence, i.e., improved support to the customer world, and not simply acquisition of an EDP hardware base, is required. To that end, we feel, with OCS, that the consolidation of the CHIVE Task Force under single management is a constructive accomplishment and will in itself be a major factor in assuring the smooth implementation of Phase III.

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OCR INSTRUCTION

CR 1-6 Organization 7 July 1967

REORGANIZATION OF OCR

- 1. The Office of Central Reference is undergoing its most comprehensive reorganization and revemping in the twenty year history of the Agency. The sweeping changes now in process have been precipitated by severe manpower raductions and the resultant necessity to curtail and reorient central reference services to conform to new DDI and Agency policies. The actions being taken are simed at improving the entire central reference activity, effecting a closer meshing and interaction between the central reference and intelligence production functions, and improving cost-effectiveness through the use of streamlined operating procedures and advanced information handling technology. The new organization stresses a higher degree of professionalism at the analyst level and demands aggressive and imaginative management both in the control of operations and the development of refined processing methods.
- 2. Senior management and the OCR Reorganization Planning Group have completed the major tasks of planning the reorganization, allocating people and space to the new structure, formulating initial operational processing and service procedures, and preparing the schedule for implementation. The overall reorganization plan, which has been developed on an accelerated time schedule, contains many new concepts but is. I am confident, a realistic approach to the problem of providing effective central reference support with significantly reduced manpower. The new organization stresses standardization, uniformity and high selectivity in processing intelligence information. The new OCR will have two major line components and a staff:
 - a. An Information Services Group, consisting of five geographic divisions and the CIA Library, to index and process information, answer questions, and produce reports.
 - b. A Document Systems Group, consisting of three functionally aligned divisions, to provide centralized support to the geographic divisions and to other Agency and Community activities, as appropriate, in the areas of open literature acquisition, photo and film collection service, document and photo dissemination, storage and retrieval, and electronic data processing.

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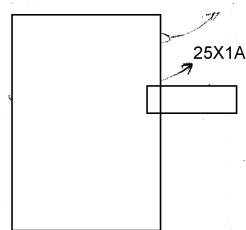
- c. A Planning and Management Staff to operate a management information system, perform centralized planning and program analyses, direct and coordinate experimental system development and testing of new concepts, handle PPB matters, and provide administrative services to the entire organization.
- 3. Particularly close attention has been given to the placement of personnel in the new structure. The talents, experience, performance, and career potential of each employee were considered; each assignment is considered a practical compromise between the capabilities of the individual and the requirements of the office. Each employee, regardless of grade, is assigned on a trial basis for a period of observation and evaluation; changes in assignment will be made, as necessary, to perfect the matching of talents to the needs of the office. No employee is automatically assured of promotion by virtue of his placement in a particular position as promotion will be considered on the basis of demonstrated ability to handle the responsibilities of the new job.
- 4. OCR strength will be reduced from FY69. It is anticipated that normal personnel attrition will account for most of this reduction and limit the impact on the individual employee.

5. Each OCR employee will be notified of his new assignment during the period 10 - 21 July 1967. The notification will take the form of short, personal interviews with the chiefs of the new divisions. Following are the senior personnel assignments in the new 25X1A organization:

Chief, Information Services Group
Special Assistant
Programs Coordinator
Staff Assistant/Indexing Officer

CIA Librarian Chief, Reference Branch Chief, Circulation Branch

Chief, USSR Division
Chief, Economic and Scientific
Branch
Chief, Political and Military
Branch



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^{*} Will transfer from Library.

Chief, Far East/Pacific Division Chief, China Branch Chief, Asia Branch

Chief, Europe Division Chief, Eastern Europe Branch Chief, Western Europe Branch

Chief, Near East/Africa Division Chief, Africa Dranch Chief, Middle East/South Asia Branch

Chief, Western Hemisphere Division Chief, South America Eranch Chief, Central America/North America Branch

Chief, Document Systems Group Special Assistant

Chief, Acquisition & Dissemination Division

Chief, Acquisitions Branch Chief, Dissemination Branch Chief, Support Branch

Chief, Document & Pictorial Services Division

> Staff Assistant Chief, Document Library Branch Chief, Photo/Technical Branch Chief, Search & Pictorial Services Branch

Chief, EDP Support Division Chief, Operations Branch Chief, Programming Applications Branch

Chief, Planning and Management Staff
Chief, MIS/PPB Branch
Chief, Experimental Facility
(CHIVE/COG)
Chief, Support Branch

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PPB

Curator, Historical Intelligence Collection Walter Pforzheimer

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- 6. An overview of the reorganized OCR will be presented to all employees during the week of 10 July 1967.
- 7. The Far East/Pacific Division has been selected to initiate the reorganization. This division will be partially formed on or about 15 August 1967 and will commence full operations 15 September 1967. The remaining geographic divisions will be phased into operation between 15 October and 31 December. The divisions and branches of the Document Systems Group will be established within this time period, dependent upon the overall pace of the reorganization, and the availability of personnel and space. The Planning and Management Staff will commence operations on 17 July 1967.
- 8. During the period 7 July 15 September 1967, the Reorganization Planning Group (RPG) will execute various follow-on tasks aimed at setting the detailed operating procedures for the Information Services Group. Similar work will be done concurrently within the Document Systems Group. The RPG will be temporarily augmented by personnel selected to assist in the completion of the follow-on tasks.
- 9. The CHIVE project has been affected by the directed manpower reductions, the OCR reorganization, and slippages in the development of computer programs. Several CHIVE concepts have been incorporated into the OCR reorganization, thus eliminating the necessity for continued CHIVE work on the concepts and freeing CHIVE personnel for assignment in OCR line operations. Pending clarification of the computer programming problem, testing of selected CHIVE concepts in the China Operations Group will continue under the direction of the Planning and Management Staff.
- 10. The logistics and space arrangements for the reorganization are being planned now with the appropriate offices of the Deputy Director for Support. Tentative plans are to locate elements of the Document Systems Group on the ground and first floors of Headquarters building, with the five area divisions and the CIA Library of the Information Services Group being located as closely together as possible on the first floor.
- ll. The approach is new, the changes are sweeping, and many of you will be asked to undertake assignments and master techniques and skills radically different from today's operations. I know that the myriad changes will present us with many problems but they will, at the same time, challenge our imagination and ability and give us a real opportunity to build an even finer reference service.

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12. For many years OCR has been in the forefront of the information handling activities of the latelligence Community. I greet this new system we are setting out to implement with enthusiasm and anticipation and I am confident that with your help we can keep CCR in its presminent position, provide responsive service to our customers, and afford each of us a stimulating and rewarding career.

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Lirector of Central Reference

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